

Notice of Allowability

Application No.

10/612,621

Examiner

Crystal J. Barnes

Applicant(s)

SEEM, JOHN E.

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application received on 02 July 2003.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>06 October 2003</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. The following is a Notice of Allowability upon examination of the above-identified application on the merits. Claims 1-25 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Scott M. Day, Reg. No. 52,801 on 23 February 2005.

The application has been amended as follows:

IN THE CLAIMS:

Claim 1, lines 10 and 13; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 6, line 2; deleted "tune band" and inserted --tune noise band--.

Claim 9, line 3; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 10, lines 10 and 13; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 15, line 2; deleted "tune band" and inserted --tune noise band--.

Claim 18, line 3; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 19, lines 8-9; deleted "tune band" and inserted --tune noise band--.

Claim 19, lines 11 and 14; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 20, line 3; deleted "the controller" and inserted --the proportional gain and integral time controller--.

Claim 22, lines 1-2; deleted "the controller" and inserted --the proportional gain and integral time controller--.

REASONS FOR ALLOWANCE

3. Claims 1-25 are allowed.
4. The following is an examiner's statement of reasons for allowance:

As per claim 1, the prior art of record taken alone or in combination fails to teach determining if control output and process output are oscillating quickly based on predefined criteria and adjusting the gain used by the proportional gain and integral time controller if the control output and process output are oscillating quickly.

As per claim 10, the prior art of record taken alone or in combination fails to teach means for determining if control output and process output are oscillating quickly based on predefined criteria and means for adjusting the gain used by the proportional gain and integral time controller if the control output and process output are oscillating quickly.

As per claim 19, the prior art of record taken alone or in combination fails to teach determining a new gain and a new integral time and setting the gain and integral time of the proportional gain and integral time controller to the new gain and new integral time if the pattern is not insignificant and the control output is not saturated.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

Information Disclosure Statement

5. The examiner is considering the information disclosure statements (IDS) submitted on 06 October 2003.

Drawings

6. Formal drawings in compliance with 37 CFR 1.121(d) are required in this application. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

7. Inasmuch as the words "improved," "improvement of," and "improvement in" are not considered as part of the title of an invention, these words should not be included at the beginning of the title of the invention and will be deleted when the

Office enters the title into the Office's computer records, and when any patent issues.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to adaptive proportional integral controllers in general:

USPN 5,805,448 to Lindsay et al.

USPN 5,568,377 to Seem et al.

USPN 5,157,597 to Iwashita

USPN 3,906,196 to Spitz

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJB
23 February 2005



Anthony Knight
Supervisory Patent Examiner
Group 3600